

REMARKS/ARGUMENTS

Applicant requests entry of this Request for Continued Examination (RCE) and amendment in response to the Final Office Action dated September 1, 2009, and the Advisory Action dated December 18, 2009, after having timely filed a Notice of Appeal on March 1, 2010, with three extensions of time.

Claims 4-9 are pending in the Application. Claim 4 is currently amended. Claim 9 is new. The amendment to Claim 4 replaces the phrase "less than 0.05%" of component (A) with no more than 0.04 % of component (A). New Claim 9 limits component (A) to at least 0.001 %, but no more than 0.04 %. Support for the amendment to Claim 4 and new Claim 9 is found in the Specification at pages 14-15, bridging ¶.

No new matter is added.

Rejection of Claims 4-8 under 35 U.S.C. 103 over Lai

Previously presented Claims 4-8 were finally rejected under 35 U.S.C. 103 over Lai (EP 0 331 047 A1, published September 6, 1989). As applied to currently amended Claim 4 and new Claim 9, the rejection should be withdrawn.

First, Applicant's currently amended Claim 4 and new Claim 9 are drawn to a method for producing filler-containing paper having an ash content of 3-40 wt% which comprises depositing and dewatering an aqueous pulp slurry comprising:

- (1) a pulp stock containing a titanium dioxide and/or calcium carbonate filler, and
- (2) no more than 0.04 % by dry mass of raw material pulp, of a cationic polymer containing vinylamine units (Component A) obtained by 20 to 100 % hydrolysis of the total formyl groups in a polymer comprising N-vinylformamide units.

Applicant's Specification teaches that the interaction of the vinylamine units in the cationic polymer and the titanium dioxide and/or calcium carbonate filler enables the paper prepared by the currently claimed method to retain 3-40% of the titanium dioxide and/or

calcium carbonate filler. However, the cationic polymer must be added in an amount from at least 0.0005 % but less than 0.05 %, preferably at least 0.01 % and no more than 0.04 %, of the cationic polymer containing vinylamine units (Spec., p. 14, ll. 38-40). Applicant's Specification teaches (Spec., p. 14, l. 40, to p. 15, l. 4):

If the amount of component (A) added is less than 0.0005%, then there may be an inadequate filler yield enhancement effect and an inadequate effect in raising the opacity. Conversely, if the amount of component (A) added is 0.05% or more then, while the filler yield enhancement effect is excellent, there is considerable coagulation of the pulp fiber and filler, and there may be a reduction in the properties of the paper such as deterioration in texture and inadequate improvement in the opacity.

The Examiner finds that Lai would have taught persons having ordinary skill in the art to make filler-containing paper from a pulp including 0.01 to 0.05% of a 10-99% acid hydrolyzed homopolymer or copolymer of N-vinylformamide and 10% TiO<sub>2</sub>. That finding itself is suspect. However, in light of currently amended Claim 4 and new Claim 9 which require no more than 0.04% of the cationic polymer containing vinylamine units in all processes Applicant claims, there should be little doubt that the Examiner's conclusion of obviousness is erroneous.

When Lai's homopolymer or copolymer of N-vinylformamide is 10-99% acid hydrolyzed (Lai, p. 5, ll. 24-39), it reads on Applicant's cationic polymer (component (A)) (Lai, p. 5, ll. 31-39). However, Lai's homopolymer or copolymer of N-vinylformamide may be 10-99% base or acid hydrolyzed (Lai, p. 5, ll. 24-39). The Examiner points specifically to Lai's Example 12 (Lai, p. 8). In Example 12, however, Lai measured the % TiO<sub>2</sub> retention in paper prepared by adding a "vinylamine homopolymer" (Lai, p. 8, Example 8, 1<sup>st</sup> sentence) to pulp containing 10% TiO<sub>2</sub>. While Lai's Example 12 describes test processes for making paper containing 0%, 0.01%, 0.05%, 0.1%, 0.2%, and 1% of a "vinylamine homopolymer" and 10% TiO<sub>2</sub>, Lai's Example 12 does not identify the "vinylamine homopolymer" as a cationic polymer containing polymerized N-vinylformamide units with 10-99% of the formyl groups in the polymer being acid hydrolyzed. In fact, Lai

does not indicate whether the “vinylamine homopolymer” utilized in its Example 12 was base or acid hydrolyzed. On its face, the “vinylamine homopolymer” identified in Lai’s Example 12 is not a cationic polymer.

Lai’s Example 12 does teach that a “vinylamine homopolymer” was added to a pulp slurry containing 10% TiO<sub>2</sub> “at addition levels of 0, 0.01, 0.05, 0.1, 0.2 and 1% based on fiber” (Lai, p. 8, ll. 32-33). However, considering the results reported in Lai’s Table 4 (Lai, p. 8), Lai expressly states (Lai, p. 8, ll. 49-50):

It can be seen that the 7MM molecular weight poly(vinylamine) demonstrated a superior TiO<sub>2</sub> retention at 0.1-0.2% addition level to wood pulp.

In Table 4, Lai appears to base its finding of superior TiO<sub>2</sub> retention at 0.1-0.2% addition level to wood pulp in comparison to the TiO<sub>2</sub> retention achieved using conventionally employed polyacrylamide (PAM) polymers in the same amounts.

Lai’s analysis of the results obtained in Example 12 is consistent with its more general statement at page 5, lines 54-56:

The addition of 0.05 to 0.5 wt %, preferably 0.1 to 0.2 wt%, vinylamine polymer, based on fiber, to the aqueous cellulose fiber slurry (wet-end) provides for an increase in the dry strength of the paper product and an increase in the retention of titanium dioxide in those papermaking processes that use TiO<sub>2</sub>.

In addition, Lai claims a process for increasing the retention of TiO<sub>2</sub> which “comprises the addition of 0.05 to 0.5 wt %, based on fiber, of a poly(vinylamide) of at least 10<sup>6</sup> average molecular weight and at least 10% hydrolyzed to vinylamine units” (Lai, p. 9, Claims 1 and 9; emphasis added). Applicant’s current claims now require no more than 0.04% of the cationic polymer.

Applicant’s Specification reports improved TiO<sub>2</sub> retention using “less than 0.05 %” (Spec., pp. 14-15, bridging ¶) of the cationic polymer, “preferably . . . no more than 0.04 %” (Spec., p. 14, ll. 39-40) of the cationic polymer. All of Applicant’s current claims are limited to no more than 0.04 % of cationic polymer component (A).

Applicant now claims a process for improved TiO<sub>2</sub> retention using “no more than 0.04 %” of the cationic polymer. To the contrary, Lai reported “superior TiO<sub>2</sub> retention at 0.1-0.2 % addition level” and “an increase in the retention” on “addition of 0.05 to 0.5 wt%” of a vinylamine polymer to wood pulp (Lai, p. 8, ll. 49-50; p. 5, ll. 50-56). Nowhere does Lai teach or reasonably suggest that improved TiO<sub>2</sub> retention can be achieved using less than 0.05 wt % of a vinylamine polymer which has an average molecular weight of at least 10<sup>6</sup> and at least 10% hydrolyzed N-vinylformamide units. Lai does not provide any reasonable basis for persons having ordinary skill in the art to expect improved TiO<sub>2</sub> retention using “no more than 0.04 %” of any vinylamine polymer it discloses.

Lai reasonably would have taught persons having ordinary skill in the art that less than 0.05 wt% of a vinylamine polymer would not improve TiO<sub>2</sub> retention at all. Lai’s Example 12 does not show or suggest any improvement in TiO<sub>2</sub> retention using less than 0.05 wt% of its vinylamine polymer.

Nevertheless, citing *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775 (Fed. Cir. 1985), the Examiner found that Lai’s minimum suggested amount of 0.05% of vinylamine polymer for improved TiO<sub>2</sub> retention is “close enough that one skilled in the art would have expected them to have the same properties.” Thus, the Examiner states, “One of ordinary skill in the art would have expected substantially the same properties in a paper made using polyvinylamine at a level of 0.05% vs a level of slightly less than 0.05% and lying within the claimed range.” Advisory Action dated December 18, 2009 (AA, p. 3, 1<sup>st</sup> ¶).

The indisputable facts are that (1) Lai requires at least 0.05% of its vinylamine polymer for increased TiO<sub>2</sub> retention and increased dry strength (Lai, p. 5, ll. 54-56); (2) Lai reports superior TiO<sub>2</sub> retention in Example 12 using a minimum of 0.1% of its vinylamine polymer; and (3), the polymer used in Lai’s Example 12 may or may not be an acid hydrolyzed cationic polymer. Given the facts in this case, “close enough” is not sufficient to

establish a prima facie case of obviousness of Applicant's claimed method over Lai's disclosure.

The attached more recent decision of the Board of Patent Appeals and Interferences in *Ex parte SUSUMU TANAKA and YASUO MURAKAMI*, Appeal No. 2007-3845 (Bd. Pat. App. & Int. 2008), decided March 28, 2008), is highly instructive. The Board instructed at pages 4-5 of its decision (emphasis added; citation omitted):

The Examiner recognizes that JP '740 teaches a steel alloy having 0.5%-.9% C. However, relying on MPEP §2144.05 and *Titanium Metal Corp. of America v. Banner*, 778 F.2d 775 (Fed. Cir. 1985), the Examiner then asserts that the 0.9% C is close enough to the claimed 0.95% carbon that there is prima facie obviousness. However, as discussed above, JP'740 teaches a carbon content which is entirely outside of the claimed range and specifically warns against exceeding the upper limitation of 0.9% C due to the materially different property expected by one of ordinary skill in the art. In the other words, contrary to the Examiner's assertion, JP'740 teaches that the inclusion of greater than 0.9% carbon does not expect to produce a steel alloy having *the same properties* as a steel alloy having 0.5% to 0.9% carbon as required by *Titanium Metal Corp. of America*. As such, a person of ordinary skill in the art following the teachings of JP'740 would not have been motivated to utilize steel comprising carbon exceeding the upper limitation of 0.9% in the disclosed method. Therefore, we agree with Appellants that prima facie obviousness has not been established on the present record.

Here, Lai teaches that the inclusion of less than 0.05% vinylamine polymer does not improve TiO<sub>2</sub> retention in the paper making process. Here, as in *Ex parte SUSUMU TANAKA and YASUO MURAKAMI*, *supra*, "close enough" does not establish that the process Applicant claims would have been prima facie case of obvious to a person having ordinary skill in the art. Moreover, now the maximum content of cationic polymer required by Applicant's current claims for filler retention is no more than 0.04%, not less than 0.05%. The prior art requires at least 0.05% for increased TiO<sub>2</sub> retention.

Table 1 of Applicant's Specification reports no significant improvement in opacity and light transmission achieved using 0.01 % of a conventional cationic polyacrylamide retention aid over the opacity and light transmission achieved using no polymer retention aid at all. However, the opacity and light transmission Applicant achieved when adding 0.012 %

of the cationic polymer (Component (A)) of Applicant's current Claims 4 and 9 were significantly improved over the opacity and light transmission achieved when adding 0.01 % of a conventional cationic polyacrylamide retention aid. On the other hand, Lai's Table 4 (Lai, p. 8) shows no significant difference in the TiO<sub>2</sub> retention achieved when adding 0.01 of its vinylamine polymer in comparison to 0.01 % of polyacrylamide. Lai reports that no beneficial result was achieved using less than 0.05 wt% of its vinylamine polymer over the result that persons having ordinary skill in the art reasonably would have been led to expect when adding a conventional polyacrylamide retention polymer. In short, the comparative results reported in Lai's Table 4 and Applicant's Table 1 strongly suggest that less than 0.05 wt% of Lai's vinylamine polymer does not retain any more TiO<sub>2</sub> than would be retained with conventional retention aids. The improvement in filler retention Applicant achieved using its currently claimed method is truly unexpected.

Lai does not reasonably suggest Applicant's currently claimed method, and persons having ordinary skill in the art reading Lai's disclosure, including Example 12, reasonably would not have expected improved filler retention using at most 0.04% of the cationic polymer required in Applicant's currently claimed process. The reasonable expectation of success required for obviousness has not been satisfied. *In re O'Farrell*, 853 F.2d 894, 903 (Fed. Cir. 1988). The weight of the evidence of record as a whole favors patentability of Applicant's current claims. The Examiner's rejection over Lai properly should be withdrawn.

Rejection of Claims 4-8 under 35 U.S.C. 103 over Hartmann in view of Utecht and Lai

Previously presented Claims 4-8 were finally rejected under 35 U.S.C. 103 over Hartmann (U.S. Patent 5,008,321, issued April 16, 1991) in view of Utecht (U.S. Patent 6,184,310, issued February 6, 2001) and Lai. This rejection also should be withdrawn.

The Examiner points to Hartmann's Example 25 (Hartmann, col. 16, ll. 16-44) for a paper making aqueous slurry comprising 66 wt% pulp, 33 wt% kaolin, and about 0.05 wt% of the polymer of Example 1 (Hartmann, col. 10, ll. 13-55). Hartmann's apparent use of approximately 0.055 wt% (calculated based on grams/ton) of a cationic polymer said to be similar to the cationic polymer used in Applicant's claimed process is not "close enough" to the currently claimed "no more than 0.04%" to establish a prima facie case of obviousness. Moreover, the Examiner's case for obviousness over Hartmann's disclosure is weakened, not strengthened, by Lai's combined teaching.

The Examiner finds that the paper formed by Hartmann's process has an ash content of 18.2 wt% (Table 6: 33% initial kaolin x 55.2% ash retention = 18.2%). However, Hartmann does not teach that titanium dioxide or calcium carbonate is equivalent to kaolin as a filler in the papermaking process. Hartmann does not teach that its kaolin filler may be replaced by either titanium dioxide or calcium carbonate with reasonable expectation of the same or similar filler retention by paper. On the other hand, Applicant's Specification teaches (Spec., p. 1, l. 35, to p. 2, l. 5; emphasis added):

[W]hen compared to other papermaking fillers, the particle diameter of titanium dioxide is low and the yield at the time of papermaking in the papermaking machine is extremely low. Since the yield is low, build up and contamination of the papermaking machine and other ancillary equipment occurs. Hence, the frequency of cleaning of the papermaking machine is increased and a lowering of the production efficiency is brought about. Furthermore, waste originating in this build-up and contamination by the filler is incorporated into the paper, leading to the problem of a lowering of paper quality. This is not restricted to titanium dioxide and even when there are used fillers such as light calcium carbonate, if it is desired to increase the proportion of filler in the paper with the objective of enhancing the opacity it is necessary to increase the amount of filler added to the pulp slurry. However, in so doing, the amount of filler which is unfixed and is discharged into the white water system is also increased and the same kind of problems are brought about as in the case of the titanium dioxide above.

The PTO generally presumes that statements made in Applicant's enabling disclosure are true "unless there is reason to doubt the objective truth of the statements contained therein . . . ." *In re Marzocchi*, 439 F.2d 220, 223 (CCPA 1971). Accordingly, based on the teaching

in Applicant's Specification and no evidence of record to the contrary, persons having ordinary skill in the art reasonably would not conclude that it would be prima facie obvious to replace the kaolin filler employed in Hartmann's Example 25 with titanium oxide or calcium carbonate and reasonably expect the same or similar filler retention which Hartmann reports for kaolin filler. Hartmann does not mention titanium dioxide or calcium carbonate filler.

To remedy Hartmann's deficiencies, the Examiner continues to rely on Utecht's teaching (AA, p. 4, 1<sup>st</sup> ¶). The Examiner first finds that Hartmann and Utecht "both . . . disclose vinylamine containing polymers that can be cationic and thus have substantially the same structure as the claimed polymers" (AA, p. 4, ll. 1-3; emphasis added). Utecht teaches that carbamate-functionalized vinylamine polymers are useful as retention, drainage, and flocculation aids and as fixatives in papermaking (Utecht, Abstract; col. 6, ll. 56-58) in amounts ranging from 0.01-0.1 wt% based on the dry fiber materials (Utrecht, col. 7, ll. 2-13). However, not only is the cationic polymer employed in Applicant's claimed process not a carbamate-functionalized vinylamine polymer but Utecht also teaches that its carbamate-functionalized vinylamine polymer is useful as a retention aid or fixing agent for undesirable "contraries" (Utecht, col. 7, ll. 4-13).

With regard to desirable fillers, Utecht teaches that its carbamate-functionalized vinylamine polymers are "useful as emulsifiers for preparing aqueous clay, chalk, titanium dioxide and kaolin slurries useful in the preparation of filled papers (Utecht, col. 7, ll. 14-18; emphasis added). The Examiner acknowledges (AA, p. 4, 1<sup>st</sup> ¶; emphasis added):

Utecht . . . teaches that the polymers are used as retention, drainage and flocculation aids in papermaking (added in amounts from 0.01 to 0.1% by weight based on dry fibers) as well as fixing agents for contraries and as emulsifiers for preparing filler slurries.

However, the Examiner has not established how and why a polymer's ability to retain filler is related to its ability to emulsify or disperse filler. And, Utecht's carbamate-functionalized



vinylamine polymers are not described or suggested as filler retention aids in either Applicant's Specification, Lai, or Hartmann.

Utecht reasonably would not have suggested to a person having ordinary skill in the art that its carbamate-functionalized vinylamine polymers are substantially equivalent to the vinylamine polymer described by Lai and Hartmann in their filler-retention properties. The fact that Utecht's carbamate-functionalized vinylamine polymers are useful as emulsifiers and fixing additives in amounts substantially less than Lai and Hartmann suggest for their polymeric retention aids itself undermines any suggestion that all polymers containing vinylamine groups are functionally equivalent as retention aids for titanium dioxide and calcium carbonate.

While Utecht's polymers and Hartmann's polymers both include vinylamine polymer units, there is no reasonable suggestion in Utecht that Hartmann's and Lai's polymers would have the same capacity to retain titanium dioxide and calcium carbonate fillers in paper in the same amounts as Utecht's polymers. The Examiner concludes (AA, p. 4, 1<sup>st</sup> ¶), "One of ordinary skill in the art would have expected the polymers of Hartmann to also work as retention aids with other commonly used fillers, such as those disclosed by Utecht et al." However, in view of Utecht's disclosure, one of ordinary skill in the art reasonably would never have expected to use the polymers Hartmann employs as retention aids for titanium dioxide and calcium carbonate fillers at a fraction of the amount Hartmann found useful for retaining kaolin in the papermaking process and at a fraction of the amount Lai found useful for retaining titanium dioxide in the papermaking process.

For the reasons stated, the rejections of Applicant's currently amended and new claims over Hartmann in view of Utecht and Lai should be withdrawn.

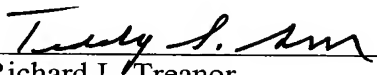
Rejection of Claim 8 over Lai or Hartmann and Utecht in view of Takashata, Snow, & Koichi

Claim 8 stands rejected under 35 U.S.C. 103 over Lai or Hartmann and Utecht, in view of Takashata (U.S. Patent 3,933,558, issued January 20, 1976), Snow (U.S. Patent 5,830,318, issued November 3, 1998), and Koichi (Japan, 09-217292, published August 19, 1997). The rejection should be withdrawn for the reasons stated with regard to the final rejections of Claims 4-8 under 35 U.S.C. 103 over Lai or Hartmann in view of Utecht and Lai. The Examiner cites Takashata, Snow, and Koichi to show that the specific kinds of papers identified in Claim 8 conventionally employ a content of titanium dioxide and/or calcium carbonate fillers within the range of 3-40 wt% for desirable opacity. Office Action dated September 1, 2009, pages 10-11. However, Takashata, Snow, and Koichi do not remedy the deficiencies of Lai, Hartmann, and Utecht relative to currently amended Claim 4. Accordingly, the rejection should be withdrawn.

For the reasons stated herein, Applicant's current claims are unobvious over the applied prior art and in condition for allowance. Early Notice of Allowance is respectfully requested.

Respectfully submitted,

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* SUSUMU TANAKA and YASUO MURAKAMI

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Appeal 2007-3845  
Application 11/138,413  
Technology Center 1700

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Decided: March 28, 2008

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Before CHUNG K. PAK, THOMAS A. WALTZ, and  
JEFFREY T. SMITH, *Administrative Patent Judges*.

SMITH, *Administrative Patent Judge*.

DÉCISION ON APPEAL<sup>1</sup>

Statement of the Case

This is an appeal under 35 U.S.C. § 134 from a final rejection of claims 1 and 2. We have jurisdiction under 35 U.S.C. § 6.

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<sup>1</sup> An oral hearing for this appeal was held on March 12, 2008.

Appeal 2007-3845  
Application 11/138,413

Appellants' invention relates to a rolling bearing that can be used in engine auxiliaries and gas heat pumps. (Spec. 1). An understanding of Appellants' invention can be gleaned from independent claim 1, which appears below:

1. A rolling bearing comprising:  
an inner ring and an outer ring; and a plurality of rolling elements rollably disposed between the inner ring and the outer ring,  
wherein at least one of the inner ring and the outer ring being made of steel, the steel including:  
carbon in the range of 0.95 to 1.25% by mass;  
silicon in the range of 0.7 to 2.5% by mass;  
manganese in the range of 0.1 to 1.5% by mass;  
chromium in the range of 0.5 to 3.0% by mass;  
molybdenum of 1.5% by mass or less;  
oxygen of 9 ppm or less;  
titanium of 30 ppm or less;  
sulfur of 80 ppm or less;  
rating number of Thin A series inclusion of 1.5 or less and  
rating number of Heavy A series inclusion of 1.0 or less,  
wherein the rating numbers are measured by a method stipulated in ASTM E45,  
and  
wherein hardness of the inner ring and the outer ring are HRC 59 or more.

The Examiner relies on the following reference in rejecting the appealed subject matter:

Yasunaga (JP '740) (as translated) JP 409087740 A Mar. 31, 1997

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Claims 1 and 2 stand rejected under 35 U.S.C. § 103(a) over JP ‘740.

We REVERSE.

The Examiner bears the initial burden of presenting a prima facie case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). In order to establish a prima facie case of obviousness, the Examiner must show that each and every limitation of the claim is described or suggested by the prior art or would have been obvious based on the knowledge of those of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988). “[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (*quoted with approval in KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007)).

The Examiner has not established obviousness in this case. Upon consideration of the record as a whole in light of Appellants’ contentions, we agree with Appellants that elements constituting a “teaching away” from the claimed invention are present in JP ‘740. *See, e.g., Kahn*, 441 F.3d at 985-86 (“A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.” (Quoting *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994))).

The invention of JP ‘740, like Appellants’ invention, relates to a high-carbon-chromium bearing parts comprising steel of SU J2 grade. The bearing parts can be used in engine auxiliaries and gas heat pumps. (JP ‘740, [0002]). JP ‘740 discloses, in the conventional manufacturing process,

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spheroidizing annealing is performed requiring a lot of energy and time. (JP '740, [0003]). JP '740 discloses when spheroidizing annealing is simplified or omitted bearing properties such as cold workability and rolling fatigue ability fall. (JP '740, [0004]). As such, the object of JP '740 is to provide a method of efficiently manufacturing bearing parts equipped with bearing properties, such as good cold workability, machinability and extended rolling fatigue life. (JP '740, [0006]). To achieve this objective, JP '740 describes a manufacturing method for bearing parts excellent in cold workability and satisfies the specified surface hardness characteristic. (JP '740, [0007]). This manufacturing method requires, *inter alia*, utilizing steel comprising carbon in the range of 0.5 to 0.9%. (JP '740, [0007]).

Regarding the amount of carbon present, JP '740 states:

C: 0.5 - 0.9%C is an element required to secure bearing properties, such as rolling fatigability, while obtaining 58 or more hardness (HRC) after hardening / annealing. The content of C cannot demonstrate such an operation effectively at less than 0.5%. A desirable lower limit is 0.7%. However, since cold workability and machinability will fall if added in excess, the upper limit is made into 0.9%.  
(JP '740 [0012])

The Examiner recognizes that JP '740 teaches a steel alloy having 0.5%-0.9% C. However, relying on MPEP §2144.05 and *Titanium Metal Corp. of America v. Banner*, 778, F.2d 775 (Fed Cir. 1985), the Examiner then asserts that the 0.9% C is close enough to the claimed 0.95% carbon that there is prima facie obviousness. However, as discussed above, JP '740 teaches a carbon content which is entirely outside of the claimed range and specifically warns against exceeding the upper limitation of 0.9% C due to the materially different property expected by one of ordinary skill in the art .

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In the other words, contrary to the Examiner's assertion, JP '740 teaches that the inclusion of greater than 0.9% carbon does not expect to produce a steel alloy having *the same properties* as a steel alloy having 0.5% to 0.9% carbon as required by *Titanium Metal Corp. of America*. As such, a person of ordinary skill in the art following the teachings of JP '740 would not have been motivated to utilize steel comprising carbon exceeding the upper limitation of 0.9% in the disclosed method. Therefore, we agree with Appellants that prima facie obviousness has not been established on the present record (Br. 8-9). The Examiner has failed to rely upon other prior art references that are not concerned with the cold workability and machinability of the components utilized in the method.

The Examiner has not adequately addressed the suitability of modifying the prior art to achieve the claimed invention.

ORDER

The Examiner's decision rejecting claims 1 and 2 is reversed.

REVERSED

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